GEORGE BONIFACE

MR. BONIFACE: Hello and thank you for this opportunity to speak. My name is George Boniface. I
1 live here in St. Louis, Missouri. I would like to draw attention to a past record as a possible indicator of future tendencies. The history of environmental cleanup at the Hanford Washington nuclear site gives cause for great concern as to the ability and competency of the Department of Energy to deal with the problems associated with nuclear and other hazardous waste cleanup. The more one looks at the matter, the more horrifying it becomes.

Since the first nuclear waste was created, the issue of how to deal with it has been put firmly on the back burner. Over 50 years have passed and the nuclear pot is literally boiling over. In fact, many of the storage tanks at Hanford have been described as "self-boiling" nuclear stew. They give off dangerous gases, which occasionally explode. They have leaked into the atmosphere and are definitely leaking into the soil.

The trusting public was told for decades that containment is not a problem. Should the tanks ever leak, the vadose zone will contain the nuclear material. Simply put, the vadose zone is the layer of relatively dry earth above the water table. The vadose zone was to be the fail-safe barrier between the water supply for millions and the most toxic substances known to man. Steel and vadose -- duck and cover.

In fact, presently, the understanding of how nuclear material actually behaves in the vadose zone is tragically deficient. There's a big gap in knowledge, there's a big gap in containment. It is horrifying to think that so little concern was shown for the fail-safe barrier known as the vadose zone. The Department of Energy pretends to be a steward of our environment. The reality is something entirely different.

One may ask, how can this be? Well, little interest, allocates insufficient resources, yields little understanding. Iron-fisted denial has worked well for years to fill in the gaps. Matthew Wald reported in his New York Times article titled "Admitting Error at Weapons Plant," dated March 23rd, 1998 in the New York Times said that they didn't know because they didn't want to know. The Honorable Senator Ron Wyden from Oregon was quoted saying, "The Department of Energy has been sticking its head in the contaminated sand for years. The department's official story was that the contamination stopped a few feet beneath the tanks, and when they got the samples from bore holes drilled near the tanks that showed contamination at much deeper levels, they argued the contamination could have been pushed down by the drilling."

Armed with this insufficient grasp of the problem, the DOE set out to clean up the tanks. The action plan read like Dr. Seuss's, "The Cat and the Hat;" take a mess and make it bigger. They laid a bed of gravel over the contaminated soil to protect workers. It would seem covering things up is one thing the DOE's good at doing. However, in so doing, water that would otherwise have evaporated or be absorbed by plants was trapped in the gravel. Now it's percolating through the nuclear waste and in the vadose zone. Water, it turns out, is an excellent conduit for plutonium dioxide. Plutonium dioxide is plutonium's form of rust. There is no safe level of exposure to this material. It was thought that the most stable form of plutonium for long-term storage was this dioxide form; however, old theories suggest this material might piggyback on a colloidal material, or clay, and hitch a ride downstream.

New evidence demonstrates that this plutonium dioxide is water-soluble and is easily washed away. After pumping the liquid waste out of these tanks, the next bold move from the DOE was to remove the unpumpable sludge and solid waste by using high-pressure hoses, creating a slurry and sluice it out. Well, if this sounds a little risky and a little ill-conceived, it's because it is. This action will force more radioactive material from the already damaged tanks into the vadose zone. The vadose zone drains into the water table that is only a few miles from the Columbia River.

MR. BROWN: About one minute remaining.

MR. BONIFACE: In the mid-1980s the Honorable Senator John Glenn from Ohio, as chairman of the Government Operations Committee, investigated Hanford. He made requests for more vigorous monitoring of soil contamination. Six years past and Hanford only had promises and fired whistle-blowers to show for it. Frustrated at the inaction, Senator Glenn and Senator Wyden asked the Government Accounting Office to investigate. The GAO report revealed this horrifying story of negligence. Only in the glare of light from this report did the Department of Energy admit it made a mistake in its lack of understanding of the vadose zone.

The consequences have been severe. Nearly one million gallons of radioactive waste has leaked. It has reached the groundwater. It is endangering wildlife, commercial fisheries and everyone downstream from Hanford on the Columbia River. It would seem systemic problems at the DOE have now created systemic problems in the Columbia River basin. The Department of Energy said that for decades this waste storage tanks would not reach the groundwater for 10,000 years. Precious time was lost. Consequences multiplied. The tanks are barely 50 years old. The nuclear waste is already in the water table. This 10,000 year promise sounds strikingly similar to the 10,000 year promise made for the scheme planned for Yucca Mountain. Perhaps we ought to reconsider. Thank you.